Amendment and Response
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Title: METHOD AND APPARATUS FOR PRINT MEDIA DETECTION

IN THE CLAIMS

Please add new claim 15.

Please amend claims 1, 2, 5-7, 9, and 12 as follows:

1. (Currently Amended) A method for identifying an unknown print medium, the method comprising:

transporting a print medium along a paper path ~~of a hard copy apparatus structure including a lower paper guide including a reflective element and a non-reflective element, the lower paper guide positioned subjacently to a transmissive sensor~~ relative to a paper guide, the paper guide positioned subjacently to a transmissive sensor and supporting a reflective element and a non-reflective element in a stationary position relative to the transmissive sensor;

beaming transmissive light through the print medium;

impinging the transmissive light onto the reflective element;

impinging the transmissive light onto the non-reflective element;

sensing a reflected light from the reflective element and the non-reflective element;

recording data representative of light reflection and light absorption; and

comparing recorded data from said recording to predetermined data representative of a known print medium thickness and a known print medium transmissivity.

2. (Currently Amended) The method as set forth in claim 1 wherein ~~the step of~~ recording data representative of light reflection and light absorption further comprises:

recording transmissive light levels of the print medium over a lightwave reflective element, and

recording transmissive light levels of the print medium over a lightwave absorptive element.

3. (Original) The method as set forth in claim 1 further comprising:

when no match between said recorded data and said predetermined data is obtained, storing said recorded data as a new print medium data file.

4. (Original) The method as set forth in claim 1 embodied in computer code.

5. (Currently Amended) A method for characterizing print media comprising:

transporting a print medium along a paper path ~~of a hard copy apparatus structure including a lower paper guide including a reflective element and a non-reflective element, the lower paper guide positioned subjacently to a transmissive sensor~~ relative to a paper guide, the paper guide positioned subjacently to a transmissive sensor and fixedly supporting a reflective element and a non-reflective element relative to the transmissive sensor;

beaming transmissive light through the print medium;

impinging the transmissive light onto a surface reflective of the transmissive light and a surface absorptive of the transmissive light;

recording a profile representative of light reflection and light absorption of the print medium; and

storing said profile in a memory with an identifier associated with said print medium.

6. (Currently Amended) The method as set forth in claim 5 further comprising:

beaming the transmissive light through a second type of print medium;

impinging the transmissive light onto the surface reflective of the transmissive light and the surface absorptive of the transmissive light;

recording a profile representative of light reflection and light absorption of the second type of print medium; and

storing said profile in ~~a~~ the memory with an identifier associated with said second type of print medium.

7. (Currently Amended) ~~The method as set forth in claim 6 further comprising:~~ A method for characterizing print media comprising:

transporting a print medium along a paper path of a hard copy apparatus structure including a lower paper guide including a reflective element and a non-reflective element, the lower paper guide positioned subjacently to a transmissive sensor;

beaming transmissive light through the print medium;

impinging the transmissive light onto a surface reflective of the transmissive light and a surface absorptive of the transmissive light;

recording a profile representative of light reflection and light absorption of the print medium;

storing said profile in a memory with an identifier associated with said print medium;

beaming the transmissive light through a second type of print medium;

impinging the transmissive light onto the surface reflective of the transmissive light and the surface absorptive of the transmissive light;

recording a profile representative of light reflection and light absorption of the second type of print medium;

storing said profile in the memory with an identifier associated with said second type of print medium;

beaming the transmissive light through a third type of print medium;

impinging the transmissive light onto the surface reflective of the transmissive light and the surface absorptive of the transmissive light;

recording a profile representative of light reflection and light absorption of the third type of print medium; and

referencing said memory as a look-up table for identifying the profile of the third type of print medium.

8. (Previously Presented) A method for determining a multi-pick feed of cut sheet print media, the method comprising:

transporting a print medium along a paper path of a hard copy apparatus structure including a lower paper guide including a reflective element and a non-reflective element, the lower paper guide positioned subjacently to a transmissive sensor;

beaming transmissive light through the print medium;

impinging the transmissive light onto the reflective element;

impinging the transmissive light onto the non-reflective element;

sensing a reflected light from the reflective element and the non-reflective element;

recording data representative of light reflection and light absorption;

storing first data representative of media thickness and transmissivity of a single sheet of a known print medium;

storing second data representative of media thickness and transmissivity of at least two stacked sheets of the known print medium;

recording third data representative of the print medium thickness and transmissivity; and

comparing said third data to said first and second data.

9. (Currently Amended) A print media sensor device, comprising:

a light emitter positioned in a linear transport region of a paper path~~, for~~ and directing a light beam across the paper path, the light beam having predetermined intensity and wavelength for penetrating a sheet of print media in said paper path;

a reflective element and a non-reflective element ~~mounted to an apparatus structure including a lower paper guide positioned in the paper path, the reflective element and the non-reflective element aligned with the light emitter;~~ positioned in the linear transport region of the paper path, the reflective element and the non-reflective element supported in a stationary orientation relative to the light emitter and aligned with the light emitter such that said light beam is received by the reflective element and the non-reflective element after passing through the sheet of print media in said paper path; and

a light detector positioned in the linear transport region of the paper path and providing an output signal indicative of thickness and transmissivity of the sheet of print media.

10. (Previously Presented) The device as set forth in claim 9 wherein said output signal further comprises a first level when no print media is interrupting the light beam, a second output signal indicative of the sheet of print media interrupting the light beam, and at least one other signal level indicative of multiple sheets of print media interrupting the light beam.

11. (Previously Presented) The device as set forth in claim 9 wherein said output signal further comprises a first signal when no print media is interrupting the light beam, a second signal when the sheet of print media is interrupting the light beam over a reflective surface,

and a third signal when the sheet of print media is interrupting the light beam over an absorptive surface.

12. (Currently Amended) The device as set forth in claim 11 further comprising:

the light emitter mounted to a transport, the transport powered for scanning said light beam across the paper path wherein the reflective element and the non-reflective element are mounted transverse to said paper path such that the sheet of print media passes between said light emitter and said reflective element and ~~absorptive~~ said non-reflective element.

13. (Previously Presented) The device as set forth in claim 12 wherein the light emitter further comprises:

an LED optical emitter.

14. (Cancelled)

15. (New) The method as set forth in claim 6 further comprising:

beaming the transmissive light through a third type of print medium;

impinging the transmissive light onto the surface reflective of the transmissive light and the surface absorptive of the transmissive light;

recording a profile representative of light reflection and light absorption of the third type of print medium; and

referencing said memory as a look-up table for identifying the profile of the third type of print medium.